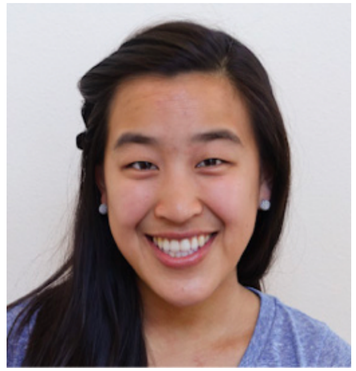
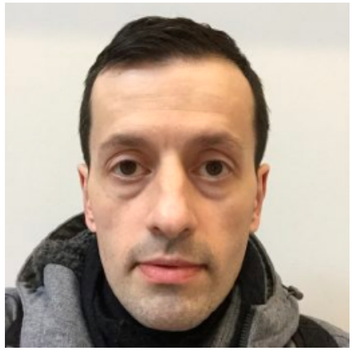
The people



Christine Tedijanto



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REPORT

Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period

Stephen M. Kissler[1,*], Christine Tedijanto[2,*], Edward Goldstein[2], Yonatan H. Grad[1,†,‡], Marc Lipsitch[2,†,‡]

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What happens next?

Four months into the severe acute respiratory syndrome–coronavirus 2 (SARS-CoV-2) outbreak, we still do not know enough about postrecovery immune protection and environmental and seasonal influences on transmission to predict transmission dynamics accurately. However, we do know that humans are seasonally afflicted by other, less severe coronaviruses. Kissler *et al.* used existing data to build a deterministic model of multiyear interactions between existing coronaviruses, with a focus on the United States, and used this to project the potential epidemic dynamics and pressures on critical care capacity over the next 5 years. The long-term dynamics of SARS-CoV-2 strongly depends on immune responses and immune cross-reactions between the coronaviruses, as well as the timing of introduction of the new virus into a population. One scenario is that a resurgence in SARS-CoV-2 could occur as far into the future as 2025.

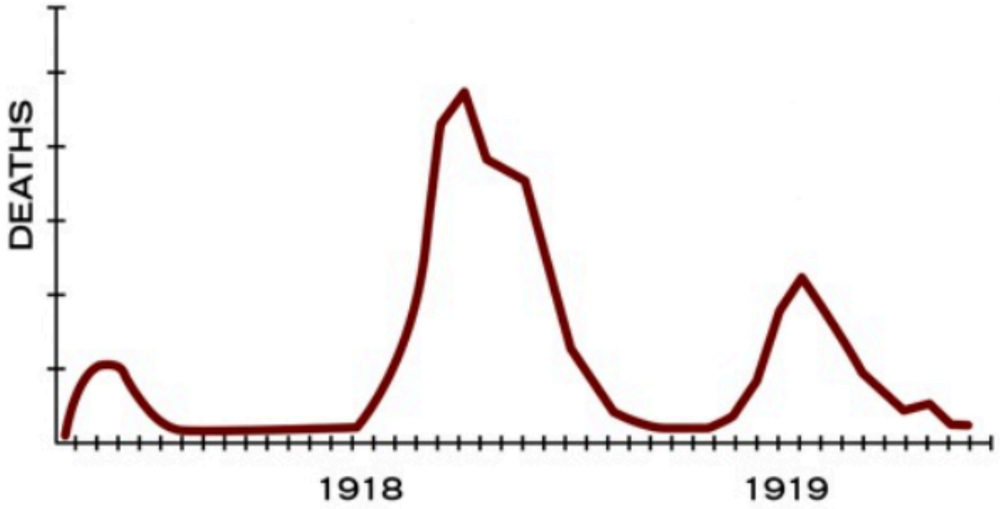
Science, this issue p. **860**

Pre-modeling – Model building – Model analysis

What we knew about influenza pandemics

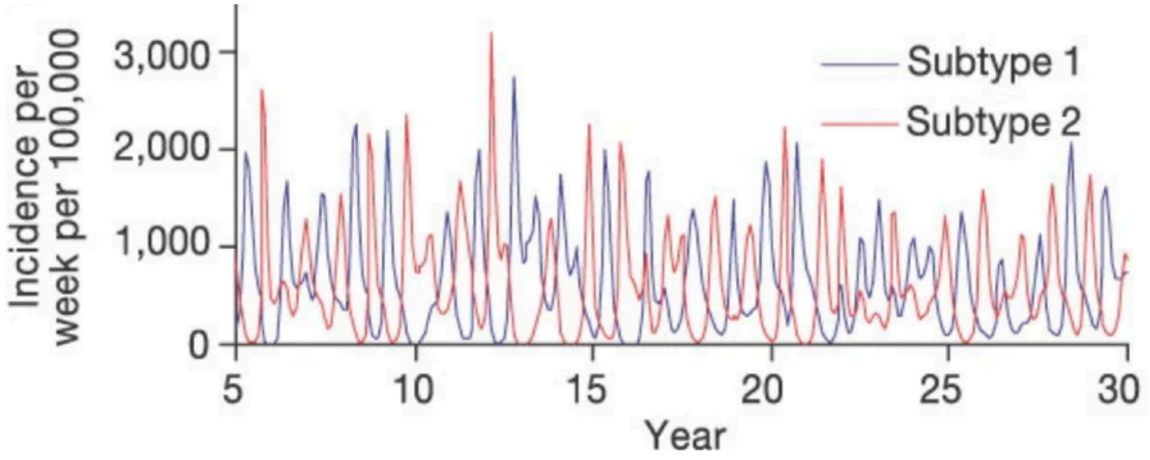
Will these be true for SARS-CoV-2?

Seasonality



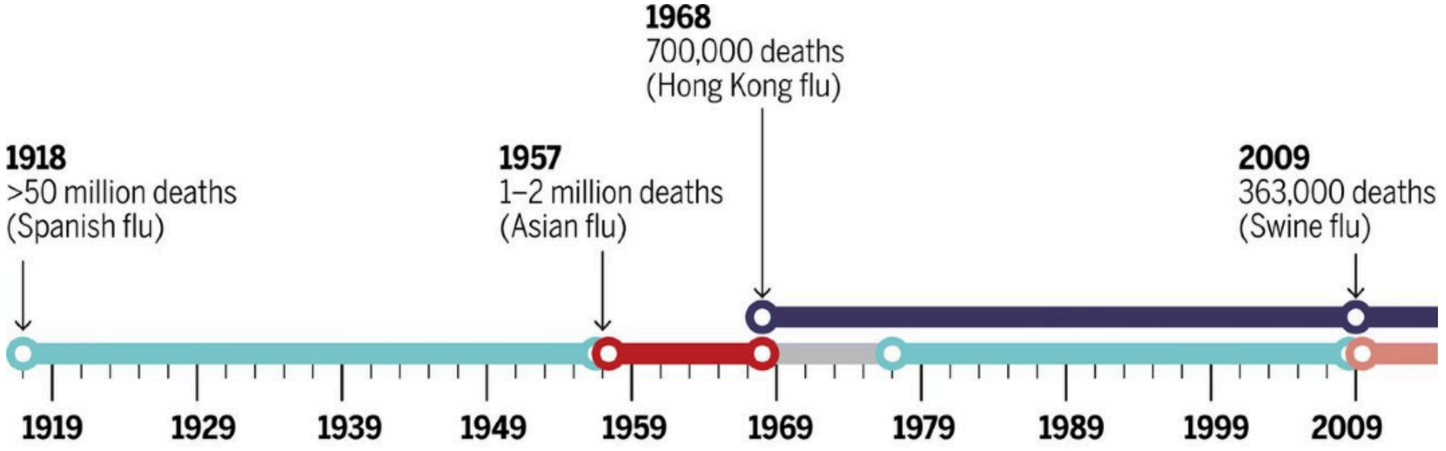
https://www.cdc.gov/flu/pandemic-resources/

Cross-immunity



Ferguson et al. (2003), Nature

Waning immunity/Long-term fixation



Taubenberger et al. (2019), Science Translational Medicine